

Listing of the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

1. (Previously amended) An image expanding apparatus, comprising:

coding parameter detecting means for detecting coding parameters from an image code, said image code including a plurality of layout objects, each layout object of said plurality of layout objects including a plurality of tiles, said coding parameters including a number of layout objects of the plurality of layout objects that are in a particular page;

expanding parameter designating means for designating expanding parameters, said expanding parameters including a number of particular layout objects to be displayed in an expanded image;

extracting parameter calculating means for calculating extracting parameters based on the coding parameters and the expanding parameters, said extracting parameters including (i) one or more certain layout objects of the plurality of layout objects that are necessary for providing the expanded image and (ii) for each layout object of the one or more certain layout objects, one or more particular tiles of the plurality of tiles of the layout object that are to be used to provide the expanded image; and

code extracting means for extracting a code necessary for obtaining the expanded image designated by the expanding parameters from the image code with reference to the extracting parameters.

2. (Previously amended) The image expanding apparatus as set forth in claim 1, further comprising:

image expanding means for obtaining the expanded image designated by the expanding parameters based on the extracted code.

3. (Original) The image expanding apparatus as set forth in claim 1,

wherein the code extracting means is configured to extract as the extracted code a code having a necessary resolution level of a necessary tile of a necessary layout object.

4. (Previously amended) The image expanding apparatus as set forth in claim 1,
wherein the coding parameters further include vertical and horizontal sizes in pixels of
a page image and a size of a tile,
wherein the expanding parameters further include an expanded image size
proportional to a resolution of the expanded image and an image display area for each of the
particular layout objects, and
wherein the extracting parameter calculating means is configured to further calculate
as the extracting parameters a resolution level necessary for expanding an image based on the
coding parameters and the expanding parameters.
5. (Original) The image expanding apparatus as set forth in claim 1,
wherein the image expanding apparatus deals with a compound document file format
according to the JPEG 2000 system.
6. (Previously amended) An image expanding method, comprising:
detecting coding parameters from an image code, said image code including a
plurality of layout objects, each layout object of said plurality of layout objects including a
plurality of tiles, said coding parameters including a number of layout objects of the plurality
of layout objects that are in a particular page;
designating expanding parameters, said expanding parameters including a number of
particular layout objects to be displayed in an expanded image;
calculating extracting parameters based on the coding parameters and the expanding
parameters, said extracting parameters including (i) one or more certain layout objects of the
plurality of layout objects that are necessary for providing the expanded image and (ii) for
each layout object of the one or more certain layout objects, one or more particular tiles of the
plurality of tiles of the layout object that are to be used to provide the expanded image; and
extracting a code necessary for obtaining the expanded image designated by the
expanding parameters from the image code with reference to the extracting parameters.

7. (Previously amended) The image expanding method as set forth in claim 6, further comprising:

obtaining the expanded image designated by the expanding parameters based on the extracted code.

8. (Original) The image expanding method as set forth in claim 6, wherein the code extracting step is performed by extracting as the extracted code a code having a necessary resolution level of a necessary tile of a necessary layout object.

9. (Previously amended) The image expanding method as set forth in claim 6, wherein the coding parameters further include vertical and horizontal sizes in pixels of a page image and a size of a tile,

wherein the expanding parameters further include an expanded image size proportional to a resolution of the expanded image and an image display area for each of the particular layout objects, and

wherein the extracting parameter calculating step further includes calculating as the expanding parameters a resolution level necessary for expanding an image based on the coding parameters and the expanding parameters.

10. (Original) The image expanding method as set forth in claim 6, wherein the image expanding method deals with a compound document file format according to the JPEG 2000 system.

11. (Previously amended) A storing device storing a program which, when executed on a computer, causes the computer to perform an image expanding method, the image expanding method comprising:

detecting coding parameters from an image code, said image code including a plurality of layout objects, each layout object of said plurality of layout objects including a plurality of tiles, said coding parameters including a number of layout objects of the plurality of layout objects that are in a particular page;

designating expanding parameters, said expanding parameters including a number of particular layout objects to be displayed in an expanded image;

calculating extracting parameters based on the coding parameters and the expanding parameters, said extracting parameters including (i) one or more certain layout objects of the plurality of layout objects that are necessary for providing the expanded image and (ii) for each layout object of the one or more certain layout objects, one or more particular tiles of the plurality of tiles of the layout object that are to be used to provide the expanded image; and

extracting a code necessary for obtaining the expanded image designated by the expanding parameters from the image code with reference to the extracting parameters.

12. (Previously amended) The storing device as set forth in claim 11, wherein the image expanding method further comprises:

obtaining the expanded image designated by the expanding parameters based on the extracted code.

13. (Previously amended) The storing device as set forth in claim 11,

wherein the code extracting step is performed by extracting as the extracted code a code having a necessary resolution level of a necessary tile of a necessary layout object.

14. (Previously amended) The storing device as set forth in claim 11,

wherein the coding parameters further include vertical and horizontal sizes in pixels of a page image and a size of a tile,

wherein the expanding parameters further include an expanded image size proportional to a resolution of the expanded image and an image display area for each of the particular layout objects, and

wherein the extracting parameter calculating step further includes calculating as the expanding parameters a resolution level necessary for expanding an image based on the coding parameters and the expanding parameters.

15. (Previously amended) The storing device as set forth in claim 11,
wherein the image expanding method deals with a compound document file format
according to the JPEG 2000 system.